

Remarks/Arguments

Claims 1 - 13 are pending in the application.

Applicant respectfully traverses the rejection of claims 1, 2, 5, 8-10 and 13 under 35 U.S.C. §102(b) as being anticipated by Kondo et al (US 4,721,251).

Claim 1 recites a full coverage area spray nozzle having an oscillation chamber with:

...the walls of said oscillation chamber being defined by a line revolved about an axial line passing through said inlet aperture and said outlet aperture d_2 , said end plates having a diameter D and the distance between said inlet and outlet apertures is L and ratio L/D determines the spray pattern and is adapted to support a basic toroid flow pattern that remains captive within the confines of said oscillation chamber, said toroid spinning about its cross-sectional axis and being supplied energy from the jet of liquid issue into said oscillation chamber, said toroidal flow pattern having diametrically opposed cross-sections which alternate in size to cause the jet to move in radial paths and also in tangential direction and thereby choose a different radial path at each sweep, whereby there is a random sweeping of the jet issuing from said outlet aperture over said area.

Independent claim 8 also recites that the:

...walls of said oscillation chamber being defined by a line revolved about an axial line passing through said inlet aperture and said outlet aperture d_2

Fig. 3, 11 and 23 of Kondo disclose a planar device. Figs. 14a - 14d, Figs. 15 and 21 are reproduced on the following sheet for convenience of reference. Note that Figs. 3, 11 and 23 show the device as planar and not having walls of an oscillation chamber defined by a line revolved about an axial line passing through the inlet aperture and the outlet aperture. There is no basic toroid

flow pattern that remains captive within the confines of the oscillation chamber, the toroid spinning about its cross-sectional axis as defined in the claims. In Kondo, the flow patterns shown in Figs. 7a, 7b and 7c are two separate vortices F3 and F4. The jet is issued through the outlet aperture 13 and linearly swept back and forth therein. There is no jet which is moved in a plurality of radial paths and thereby randomly traverse a different radial path at each sweep,

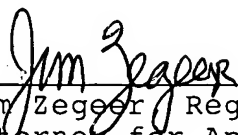
"...whereby there is a random sweeping of a jet issuing from the outlet aperture over said area".

As shown in Figs. 14a - 14d of Kondo, control signals cause the sweep bias to one side or the other of the axial line, or narrow or widen. Note in Fig. 14a with both control ports closed, the widest sweep angle is provided. In Fig. 14d with both control ports open, the narrowest sweep is provided. In Fig. 14b, with the port 2a open and port 2b closed, the sweep is biased to the right, and the reverse is shown in Fig. 14c with 2a and 2b open, and the sweep is biased to the left. This is totally foreign to applicant's invention.

In short, Kondo neither provides, discloses, teaches nor suggests anything approaching applicant's invention. In short, Kondo discloses conventional back-and-forth sweeping action of the jet issuing from his device.

In view of the above, further and favorable reconsideration is respectfully requested.

Respectfully submitted,



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Attachment: Copy of Figs. 14a - 14d, Figs. 15 and 21

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In the event this paper is deemed not timely filed, the applicant hereby petitions for an appropriate extension of time. The fee for this extension may be charged to Deposit Account No. 26-0090 along with any other additional fees which may be required with respect to this paper.